

**A Review of *Dichaetocoris* Knight (Heteroptera: Miridae):  
New Species, New Combinations, and  
Additional Distribution Records**

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The genus *Dichaetocoris* was proposed by Knight (1968) to contain twelve species of Orthotylinae from the western United States. My studies reveal that four species presently in the genus are not congeneric with *D. pinicola* Knight, the type species of *Dichaetocoris*, while a species presently in *Orthotylus*, *O. piceicola* Knight, should be transferred to *Dichaetocoris*. In this paper the following new combinations are proposed: *D. stanleyaea* Knight = *Melanotrichus stanleyaea* (Knight), *D. breviostris* Knight = *Melanotrichus knighti* Polhemus, *D. symphoricarpi* Knight = *Melanotrichus symphoricarpi* (Knight), *D. peregrinus* (Van Duzee) = *Parthenicus peregrinus* (Van Duzee), and *Orthotylus piceicola* Knight = *D. piceicola* (Knight). Two new species, *D. geronimo* and *D. mojave*, are described from Arizona and Nevada respectively, and distributional records are noted for *D. pinicola* Knight, *D. merinoi* Knight, *D. coloradensis* Knight, *D. nevadensis* Knight, and *D. spinosus* (Knight).

Generic concepts in the western Orthotylini are in serious need of revision, a project beyond the scope of the present paper. As construed here, the genus *Dichaetocoris* may be distinguished by the presence of two types of simple recumbent pubescence on the dorsum, a lack of sexual dimorphism, and restriction to coniferous hosts. The closely allied genus *Melanotrichus* possesses flattened silvery hairs on the dorsum, exhibits weak sexual dimorphism in which the females are frequently shorter and broader than the males, and occurs on a variety of non-coniferous hosts. A review of similar generic problems in British species was presented by Southwood (1953) whose subgenus *Pinocapsus* appears quite similar to *Dichaetocoris*.

The additions and deletions described herein bring the total number of species in *Dichaetocoris* to twelve, including *D. anasazi* Polhemus (1984).

All specimens treated herein are held in the Polhemus collection (JTP) unless otherwise noted.

***Dichaetocoris geronimo*, NEW SPECIES**

*Description.*—Male: Small, ovate; length 3.56 mm; maximum width 1.48 mm. Coloration dull green, occasionally fading to yellow on head and scutellum.

Head green to yellowish, eyes black; frons set with erect black setae interspersed with recumbent pale, silky hairs; gula with a small patch of pale, erect hairs; vertex set with erect black setae, width exceeding twice the dorsal width of an eye. Antennae green to yellowish, covered with short, dense, erect fuscous setae; segment I with three long, erect, fuscous setae; segments II–IV with occasional longer, erect hairs; lengths of antennal segments I–IV (in mm): 0.24; 1.00; 0.68; 0.28.

Pronotum green, finely rugulose, width at base equal to 2.8 times length; surface covered with erect black setae, intermixed with pale, recumbent, silky hairs; calli small, indistinct; a single long seta present at base of each anterior angle; posterior angles acute, rounded. Scutellum green to bright yellow, slightly raised; mesoscutum broadly exposed; surface finely rugose, set with erect fuscous hairs.

Hemelytra green, subtranslucent, shining; set with erect fuscous setae interspersed with pale, recumbent, silky hairs; fuscous hairs more dense on cuneus; membrane uniformly fumate, veins dull green.

Venter dull green, abdomen darker; rostrum pale green, tip black, length 1.32 mm, reaching beyond hind coxae. Legs green to yellowish, covered with very short, erect, fuscous hairs; femora with scattered longer pale hairs; tibial spines stout, fuscous; apices of tibiae and terminal tarsal segments infuscated. Abdomen with fine golden hairs; genital segment lacking a tergal process; left clasper slender, curved, pointed at tip; right clasper weakly sinuate, blunt (see Fig. 1).

Female: Similar to male in structure, pubescence, and coloration; length 3.48 mm; maximum width 1.40 mm.

*Material examined.*—Holotype, male, and allotype: ARIZ., Gila Co., Rye, 1120 m (3500'), IV-18-82, D. A. & J. T. Polhemus (JTP). Paratypes: 13 ♂, 23 ♀, taken with types on *Juniperus monosperma* (One Seed Juniper); 3 ♂, 5 ♀, ARIZ., Cochise Co., Portal, 1526 m (4770'), IV-28-81, D. A. & J. T. Polhemus (JTP), on *Juniperus monosperma*.

*Etymology.*—The name *geronimo* is a noun in apposition, and refers to the Apache chief who for years eluded the U.S. cavalry amidst the Arizona mountains.

*Discussion.*—*Dichaetocoris geronimo*, n. sp. has a general appearance similar to that of *D. coloradensis* Knight, but may be separated from this and all other *Dichaetocoris* species by its blunt, relatively unmodified right clasper (see Fig. 1). The left clasper is thin and curving, ending in a point, and very similar in shape to those of *D. pinicola* Knight and *D. anasazi* Polhemus. The types were taken on juniper in the company of several species of *Dichroscytus*, a mirine genus with which these bugs may be easily confused.

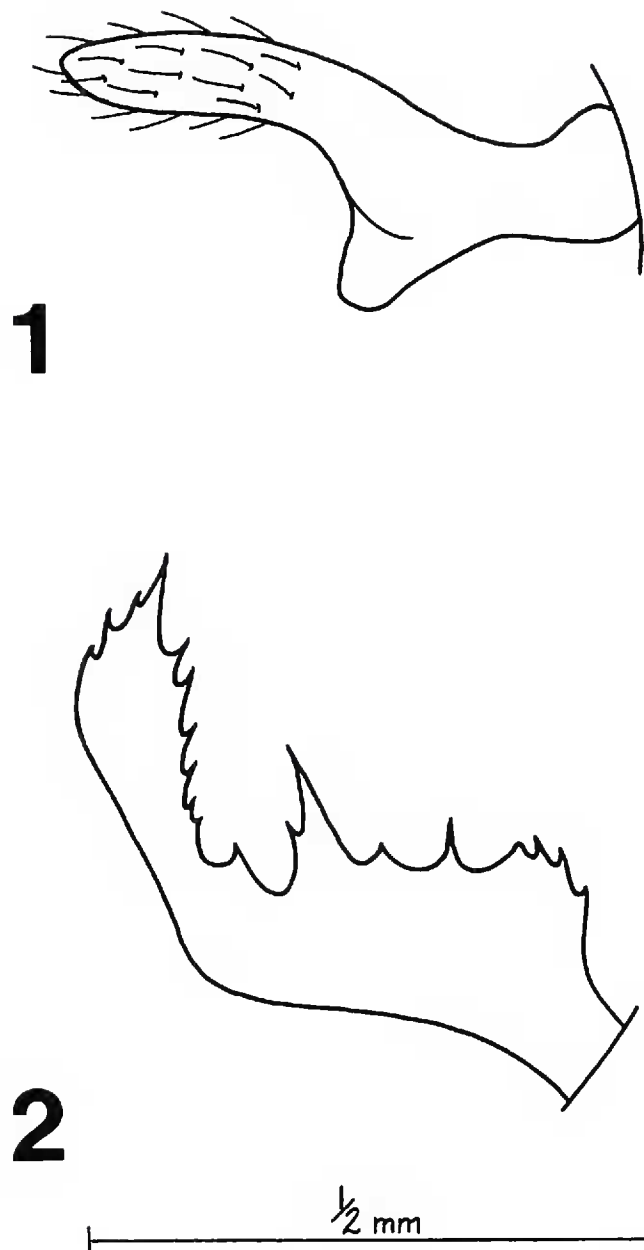
#### *Dichaetocoris mojave*, NEW SPECIES

*Description.*—Male: Small, ovate; length 3.68 mm; maximum width 1.40 mm. Coloration uniformly golden brown.

Head golden brown, eyes black; head oriented vertically, broad; frons with erect fuscous setae intermixed with pale, recumbent, silky hairs; gula with patch of fine, pale, erect hairs; vertex set with erect fuscous hairs, width subequal to twice the dorsal width of an eye. Antennae pale brown to golden; segments I–IV with short, black, bristle-like hairs; segment I bearing three long, stout, fuscous hairs; segments III and IV with scattered erect pale hairs; lengths of antennal segments I–IV (in mm): 0.24; 1.08; 0.68; 0.32.

Pronotum golden brown, trapezoidal, width at base equal to twice its length; surface finely rugulose, set with erect fuscous setae intermixed with pallid silky hairs; calli small, indistinct; a single long seta present near each anterior angle; posterior angles rounded. Scutellum golden brown, flat, mesoscutum broadly exposed; surface set with erect fuscous hairs.

Hemelytra golden brown, shining, subtranslucent; set with erect fuscous setae



Figures 1, 2. 1. *Dichaetocoris geronimo*, n. sp., male right clasper. 2. *Dichaetocoris mojave*, n. sp., male right clasper.

intermixed with recumbent pale silky hairs; fuscous hairs more dense on cuneus; membrane uniformly fumate, veins gold.

Venter golden brown, slightly darker on abdomen; rostrum length 1.64 mm, reaching past hind coxae, color light brown, tip infuscated; legs golden brown, set with short, bristle-like fuscous hairs; femora with scattered longer, erect pale hairs; tibial spines stout, fuscous; terminal tarsal segment infuscated apically; claws black. Abdomen with fine, pale pubescence; genital segment lacking a tergal process; left clasper slender, curved, pointed at tip; right clasper flat, blade-like, multispinose (see Fig. 2).

Female: Similar to male in structure, color, and pubescence. Length 3.36 mm; maximum width 1.32 mm.

*Material examined.*—Holotype, male, and allotype: NEV., Clark Co., Kyle Canyon, Mount Charleston, 2080 m (6600'), VII-20-82, J. T. Polhemus (JTP). Paratypes: 5 ♂, 2 ♀, taken with the types on *Pinus edulis* (Pinyon Pine) (JTP).

*Etymology.*—The name *mojave* is a noun in apposition, referring to the desert area from which this species was collected.

*Discussion.*—*Dichaetocoris mojave*, n. sp. is allied to *D. anasazi* Polhemus, both species having a simple, curving, undifferentiated left clasper with a pointed tip and a complex, multispinose right clasper. *D. mojave* may be separated from *D. anasazi* by its lack of a tergal process on the genital segment, and from all other *Dichaetocoris* species by its distinctive right clasper (see Fig. 2). The type series is composed of slightly teneral specimens, thus the coloration may prove darker in more mature individuals. At the Mount Charleston type locality this species occurred sympatrically with *Dichaetocoris pinicola* Knight on *Pinus edulis*.

***Melanotrichus stanleyaea* (Knight), NEW COMBINATION**

*Dichaetocoris stanleyaea* Knight, 1968:115.

Although placed by Knight (1968) in *Dichaetocoris*, examination of the paratypes reveals that this species is clearly a *Melanotrichus*, on the basis of the silvery, scale-like pubescence on the dorsum and the crescent-shaped male left clasper (typical of western *Melanotrichus* species).

***Melanotrichus knighti* Polhemus, NEW NAME**

*Dichaetocoris brevirostris* Knight, 1968:115.

As in the preceding species, this insect belongs in *Melanotrichus* on the basis of its general habitus and the possession of silvery, scale-like hairs on the dorsum. Since Knight (1968) described the species from a single female, comparison on the basis of male genitalia is at present impossible. The name *Melanotrichus brevirostris* is preoccupied (Knight, 1927b), therefore the name *Melanotrichus knighti* is proposed to avoid a secondary homonymy.

***Melanotrichus symphoricarpi* (Knight), NEW COMBINATION**

*Dichaetocoris symphoricarpi* Knight, 1968:114.

Although possessing a bifurcate male left clasper superficially similar to that encountered in many *Orthotylus* species, this species exhibits silvery, scale-like pubescence on the dorsum and weak sexual dimorphism in body shape which place it in *Melanotrichus*. It is aberrant among western U.S. *Melanotrichus* in lacking a crescent-shaped left clasper in the male; the genitalia appear more closely allied to those of *M. flavosparsus* (Sahlberg), a species found in the eastern U.S. and Europe. A good series is at hand from: UTAH, San Juan Co., Grand Flat near Collins Canyon, VI-1-82, D. A. & J. T. Polhemus (JTP).

***Parthenicus peregrinus* (Van Duzee), REVISED COMBINATION**

*Atomoscelis peregrinus* Van Duzee, 1918:303.

*Parthenicus peregrinus*: Carvalho, 1958:123, n. comb.

*Dichaetocoris peregrinus*: Knight, 1968:111, n. comb.

The correct generic placement of this species is troublesome. Examination of Van Duzee's paratypes reveals that it is certainly not a *Dichaetocoris*, yet at the same time it does not fit conveniently into any other Orthotyline genus. It is here transferred back to *Parthenicus* with the realization that such a placement is questionable and will have to be subsequently re-evaluated.

***Dichaetocoris piceicola* (Knight), NEW COMBINATION**

*Orthotylus piceicola* Knight, 1927a:180.

This small species possesses two types of simple recumbent pubescence on the dorsum, in contrast to *Orthotylus* in which but a single type is present, and feeds on *Picea englemanni*, whereas *Orthotylus* species have radiated generally on *Salix* and allied genera. A good series, the first reported since the types, was taken at: COLO., Routt Co., Strawberry Park near Steamboat Springs, VII-23-83, D. A. & J. T. Polhemus (JTP).

The following new records are noted for several species of *Dichaetocoris*:

*Dichaetocoris pinicola* Knight: CALIF., Inyo Co., along Calif. Hwy. 141 nr. 9 Mile Canyon, NW of Inyokern, CL 1631, VII-15-82, J. T. Polhemus (JTP), 3 ♂, 2 ♀. NEV., Clark Co., Kyle Canyon, Mount Charleston, 2080 m (6600'), VII-21-82, J. T. Polhemus (JTP), 5 ♂, 5 ♀. On *Pinus edulis* (Pinyon Pine).

*Dichaetocoris merinoi* Knight: CALIF., Kern Co., nr. Walker Pass, CL 1629, 1600 m (5000'), V-30-81, J. T. Polhemus (JTP), 3 ♂, 1 ♀. On *Pinus edulis* (Pinyon Pine).

*Dichaetocoris coloradensis* Knight: ARIZ., Maricopa Co., E of Sunflower, CL 1634, VI-2-81, J. T. Polhemus (JTP), 5 ♂, 2 ♀. NEV., Clark Co., Mount Charleston, 1920 m (6000'), VII-19-82, J. T. Polhemus (JTP), 1 ♂, 1 ♀; at UV light. COLO., Montrose Co., 18 mi SE of Naturita, VII-8-80, D. A. & J. T. Polhemus (JTP), 6 ♂, 10 ♀. On *Juniperus osteosperma* (Utah Juniper).

*Dichaetocoris nevadensis* Knight: UTAH, Grand Co., South Beaver Mesa, La Sal Mountains, VII-4-80, D. A. & J. T. Polhemus (JTP), 6 ♂, 9 ♀. CALIF., Inyo Co., along Calif. Hwy. 141 nr. 9 Mile Canyon, NW of Inyokern, CL 1631, VII-15-82, J. T. Polhemus (JTP), 1 ♂. COLO., Garfield Co., 10 mi E of Glenwood Springs, VI-22-82, J. T. Polhemus (JTP), 6 ♂, 2 ♀. On *Juniperus osteosperma* (Utah Juniper).

*Dichaetocoris spinosus* (Knight): COLO., Douglas Co., Waterton, 1758 m (5482'), VIII-13-82, D. A. Polhemus (JTP), 25 ♂, 10 ♀. On *Juniperus scopulorum* (Rocky Mountain Juniper).

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## PUBLICATIONS RECEIVED

The Marsh Flies of California (Diptera: Sciomyzidae). By T. W. Fisher and R. E. Orth. *Bulletin of the California Insect Survey*, vol. 24, vii + 117 pp., 31 pls., 43 maps. Issue date on review card given as January 1983. Received by PCES at CAS on 17 May 1983. Published by University of California Press, 2223 Fulton Street, Berkeley, CA 94720, telephone (415) 642-4562. Price \$20.00 paperbound. ISBN 0-520-09665-7.

An excellent treatise presenting the results of a 20 year study of the Sciomyzidae of California. As the authors state in their introduction:

This bulletin compiles available information on the taxonomy, biology, and geographical distribution of 49 species in 13 genera of sciomyzid flies known in California and on 4 forms of *Dictya montana*. Also treated are 5 species from Oregon as reported by Fisher and Orth (1975b), 2 from Nevada, and 1 from Arizona, because of their promixity may be ultimately found in the state. The text also includes comments on the ecology and habitats of sciomyzids, their potential as biological control agents of snail intermediate hosts of certain man- and animal-attacking trematodes, development of the malacophagous habit in Diptera with particular reference to the Sciomyzidae and their mollusk hosts, and collection and preparation methods.

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